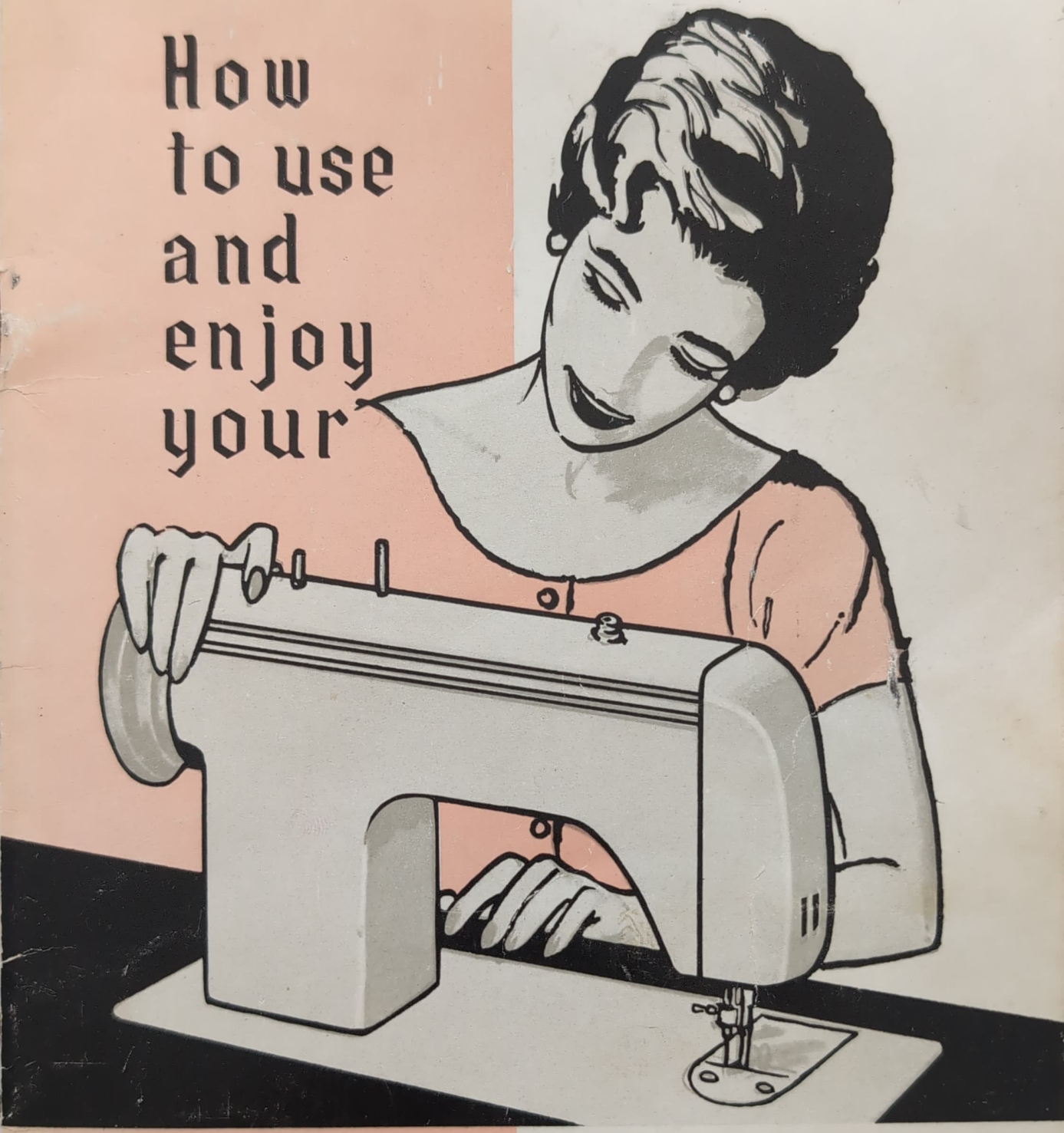
How to use and enjoy your



Sewing Machine

GETTING ACQUAINTED

In the following pages, you will see how this wonderful SEWING MACHINE will help you to enjoy sewing beautiful things for your home and family. Many decorative stitches are possible on this machine along with your basic straight stitching needs and you will find its quiet, smooth, efficient performance in the true tradition for precision engineering.

The versatility of your SEWING MACHINE will give you full play as you work with various fabrics and you can let your imagination work along with your SEWING MACHINE to produce beautiful sewn garments.

You will enjoy a lifetime of sewing pleasure with your SEWING MACHINE and we suggest that you follow this basic booklet carefully to assure you maximum enjoyment.

Consumer Service Division

BROTHER INTERNATIONAL CORPORATION

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know the parts of your sewing machine

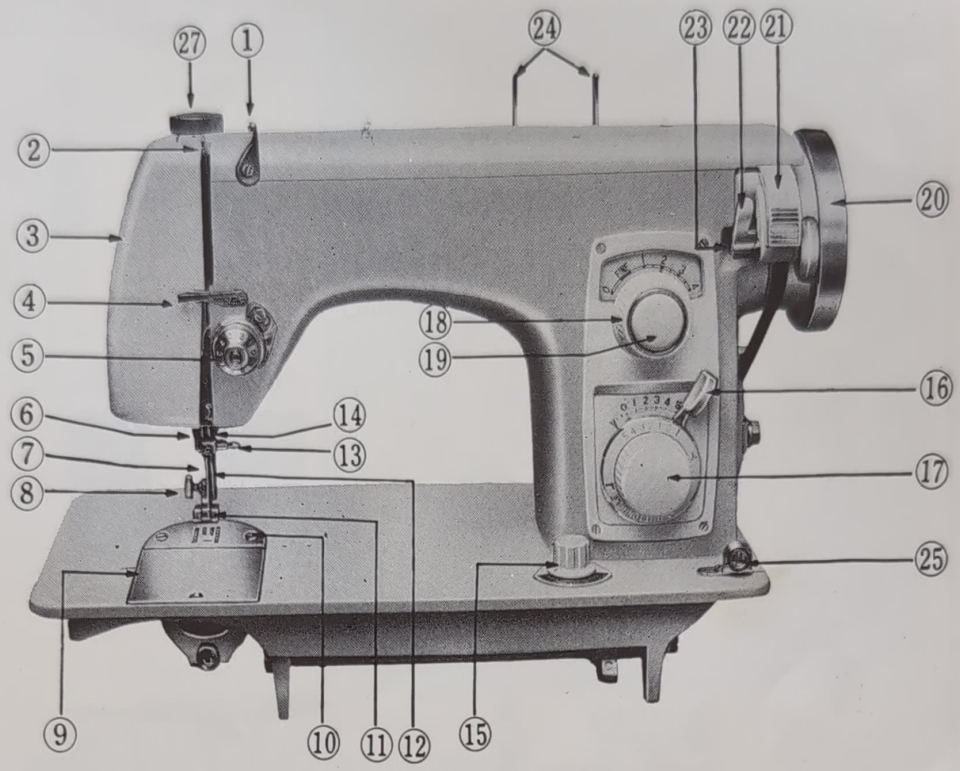


Fig. 1A

1. Upper Thread Guide
2. Thread Take-up Lever
3. Face Plate
4. Thread Guide Bar
5. Upper Thread Tension Assembly
6. Thread Cutter
7. Needle
8. Presser Foot Thumb Screw
9. Slide Plate
10. Needle Pate

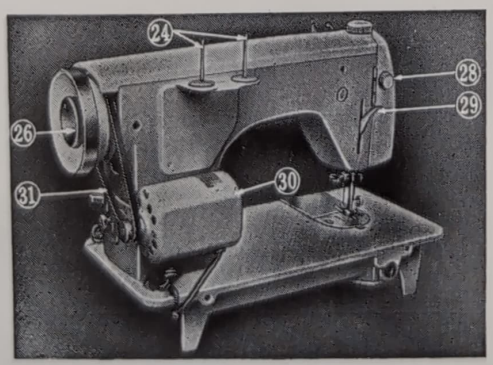


Fig. 1B

11. Universal Sewing Foot
12. Presser Bar
13. Needle Clamp Screw
14. Needle Bar
15. Drop Feed
16. Stitch Width Lever D
17. Zigzag Stitch Width Knob C.
18. Stitch Regulating Dial A
19. Push Button B for Reverse Feeding
20. Balance Wheel
21. Bobbin Winder Pusher
22. Bobbin Winder Finger
23. Bobbin Winder Stud
24. Double Spool Pin
25. Bobbin Winder Tension Assembly
26. Stop Motion Knob
27. Calibrated Fabric Indicator
28. Sewlight Switch
29. Presser Foot Lifter
30. Sewing Machine Motor
31. V-Belt

your sewing machine accessories

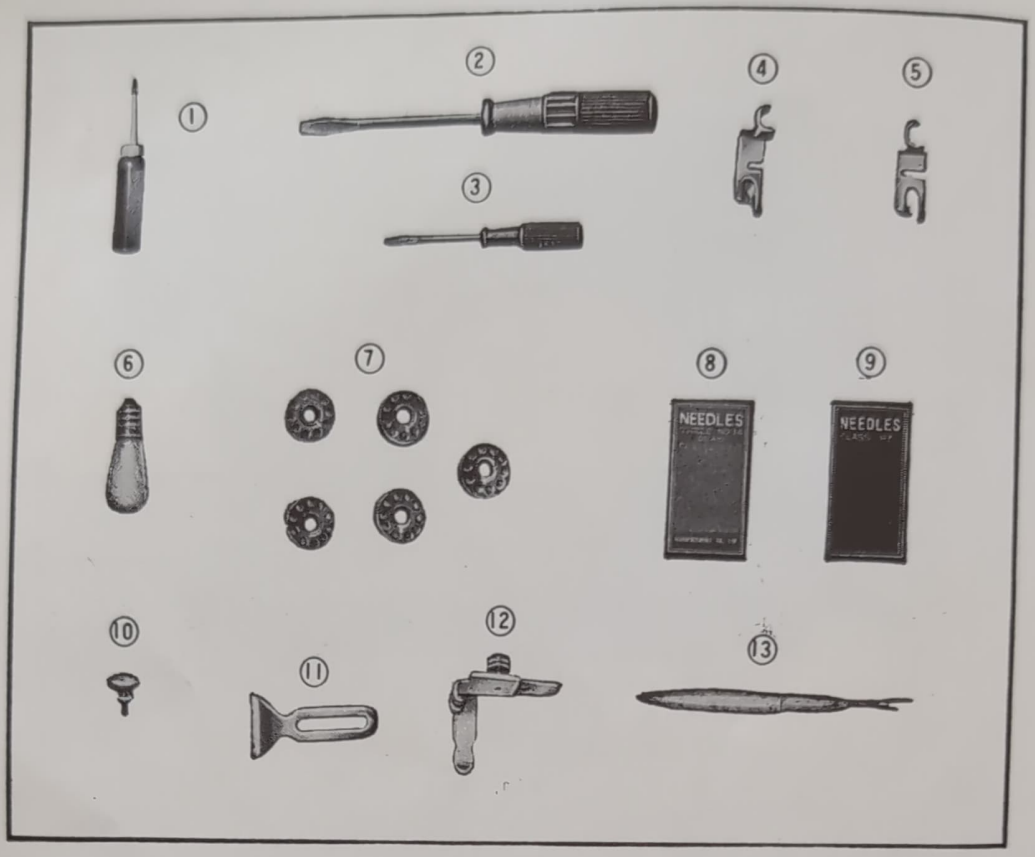


Fig. 2

1. Oil Can
2. Screw Driver—Large
3. Screw Driver—Small
4. Narrow Hemmer
5. Felling Foot
6. Sewlight Bulb
7. Bobbins
8. Needles
9. Twin Needles
10. Thumb Screw for Cloth Guide
11. Cloth Guide
12. Zipper Foot
13. Seam Ripper

SEE PAGE 3 FOR NAMES AND LOCATION OF MACHINE PARTS

oiling the machine

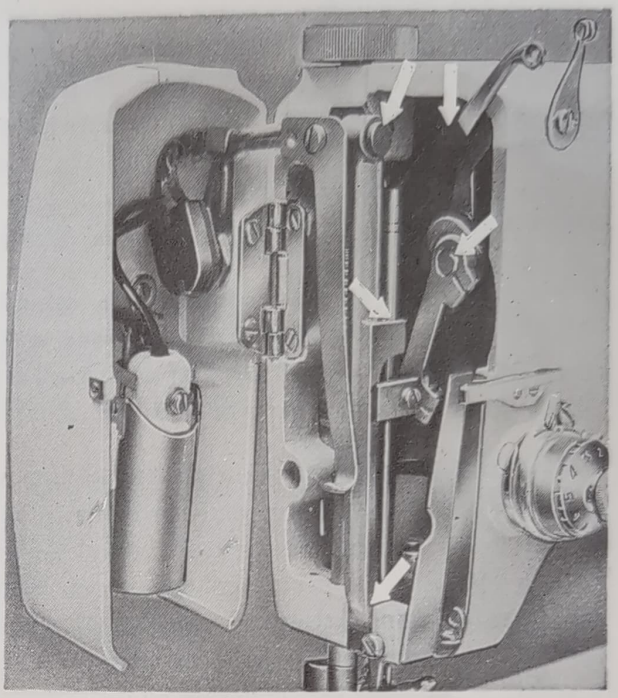


Fig. 3A

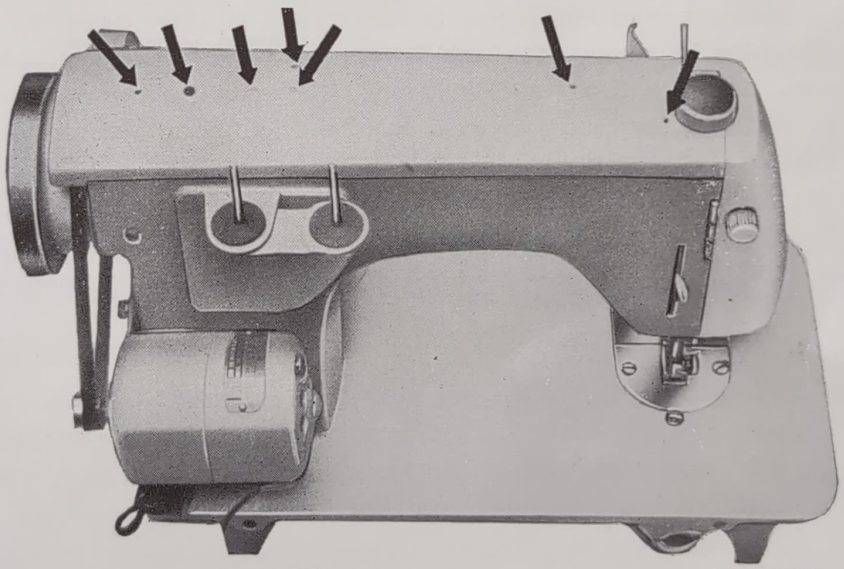


Fig. 3B

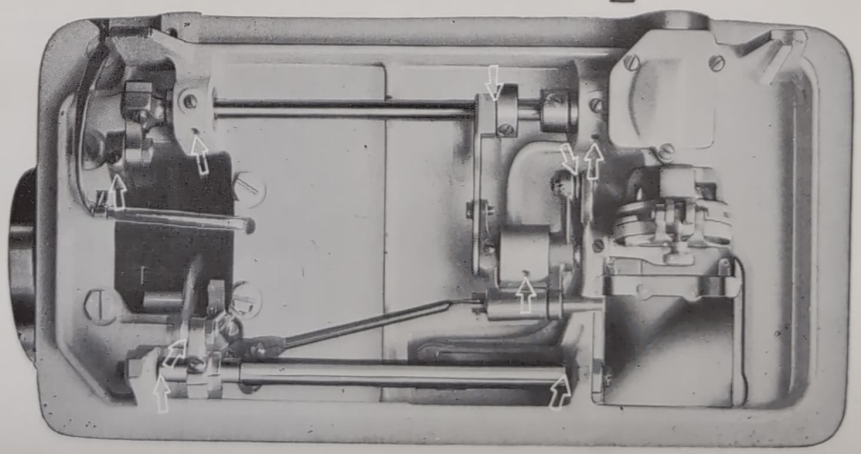


Fig. 3C

Oiling the machine. Upon unpacking the machine when it is new. It is essential to pay particular attention to the oiling before running the machine for the first time. Follow carefully all of the various oiling points shown in Fig. 3. Each oiling point lubricates a specific moving part of the machine. Having thoroughly oiled the machine, let it run for at least 5 minutes, making sure the presser foot is up. This is to ensure thorough lubrication and the smooth operation of all working parts.

How often should your machine be oiled? If your machine is in regular use, it should be oiled at least **once a Week** with Sewing Machine Oil. This should be preceeded by a through cleaning with a brush of all loose thread and lint wherever this has accumulated.

What will happen if your machine is not oiled? In the same way that you would not expect your car to continue running without oil in the engine, neither could you expect your sewing machine to do so. Your Sewing Machine is precision engineered with the highest quality of workmanship and materials. Continued working without oil will result in excessive wear of the parts, causing vibration and will ultimately result in costly replacements.

If your machine is unused for any length of time. Under these circumstances, the oil will dry up completely. Before using the machine again, it is, therefore, necessary to wash out the dried up oil and for this purpose Benzine, Kerosene can be used, drying the parts with a clean cloth. Raise the presser bar a few times to loosen it and also rotate the balance wheel by hand a few times in the direction away from you. Now lubricate the machine thoroughly, letting it run for 3 or 4 minutes before commencing to sew.

REMEMBER : Regular oiling is the key to smooth and silent operation of your machine—completely free of vibration. A few minutes only spent in looking after your machine in this way, will ensure a minimum of 25 years of sewing pleasure on your Sewing machine. If you neglect this, mechnical failures will be inevitable, resulting in both cost and inconvenience to yourself.

Remember also, to clean the machine completely free of lint and cotton before oiling. Cotton mixed up with the oil is highly abrasive and will cause excessive wear.

SEE PAGE 3 FOR NAMES AND LOCATION OF MACHINE PARTS

winding the bobbin

1. Hold the balance wheel with your left hand and with your right hand turn the stop-motion knob towards you as shown in Fig. 4. This action disengages the balance wheel from the shaft that operates the machine.
2. Place an empty bobbin on the bobbin winder stud making sure that the little slot in the bobbin engages the pin on the stud. See Fig. 5.
3. Place a spool of thread on the spool pin. Take the thread and pass it through the upper thread guide and down to the bobbin winder tension disc and pass it from left to right.

Fig. 4

4. Wind seven or eight turns of thread around the bobbin.
5. Press the bobbin winder pusher and the bobbin winder finger will be engaged between the flanges of the bobbin.
6. Turn the balance wheel towards you a few times and gently start the electric motor. This will operate the bobbin winder.
7. When the bobbin winder is fully wound it will automatically stop.
8. Break the thread and remove the bobbin by pressing the bobbin winder finger to the left.

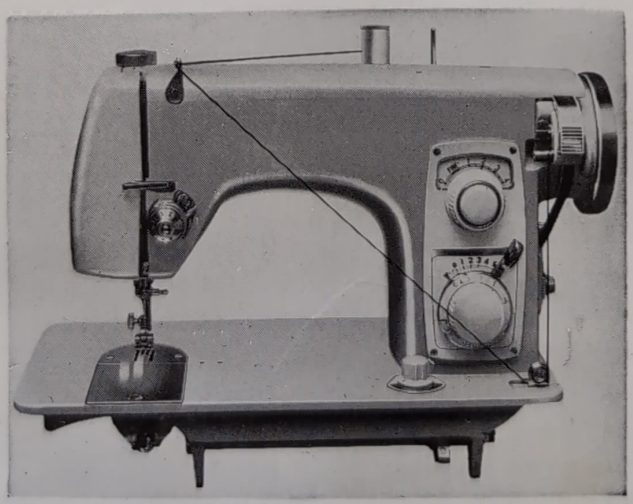


Fig. 5

9. Now re-engage the balance wheel by holding it with your left hand and with your right hand turn the stop motion knob away from you until it is quite tight.

to remove the bobbin case

Turn the balance wheel toward you until the needle is at its highest position. Pull out the slide plate and reach into the opening with your left hand, and with thumb and forefinger, open the latch and remove the bobbin case, as shown in Fig. 6. If you release the latch and turn the bobbin case downward, the bobbin will drop out (see Fig. 7A).

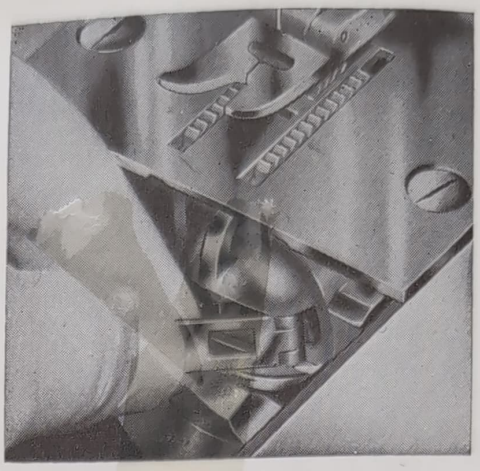


Fig. 6

threading the bobbin case

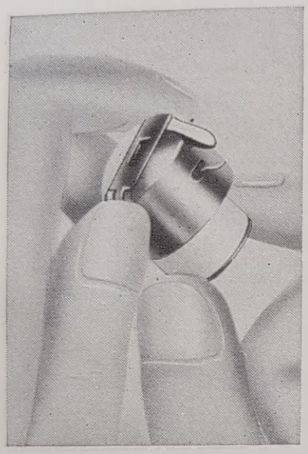


Fig. A7

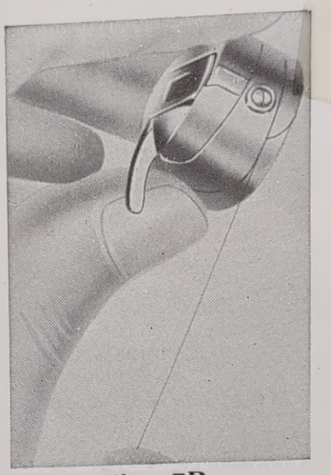


Fig. 7B

Fig. 7C

Unwind about 3 or 4 inches of thread from the bobbin. Hold the bobbin case between the thumb and forefinger of your left hand.
Take the bobbin between the thumb and forefinger of your right hand and place it in the bobbin case. See that the slot in the bobbin case faces upwards, as shown in Fig. 7A.

With the right hand, guide the thread into the slot in the edge of the bobbin case, as shown in Fig. 7B.

Now pull the thread to the right under the tension spring and into its delivery eye as shown in Fig. 7C.

adjusting the bobbin tension spring

In Fig. 8 you will see the larger screw "A". Loosen this screw to loosen the tension and tighten the screw to tighten the tension.

To know if the tension is correct, hold the bobbin case, as shown in Fig. 7C.

If the thread pulls gently without forcing, then the tension is correct. Otherwise adjust the tension accordingly.

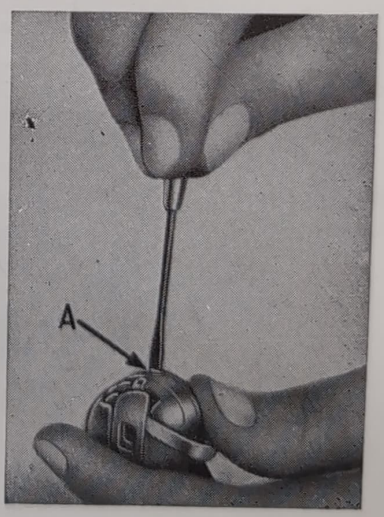


Fig. 8

SEE PAGE 3 FOR NAMES AND LOCATION OF MACHINE PARTS

to replace the bobbin case

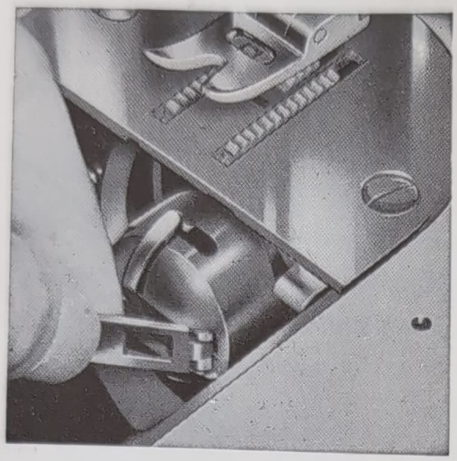


Fig. 9

Now that you have threaded the bobbin, you are ready to replace it into the bobbin case. Hold the bobbin case by the latch between your thumb and forefinger of the left hand.

Replace it on the center pin of the shuttle as shown in Fig. 9.

Then release the latch and press the bobbin case back until the latch catches and holds the bobbin case in its proper position.

The 3 or 4 inches of thread you have drawn but from the bobbin case should hang freely.

to thread the upper thread and the needle

1. Turn the balance wheel by hand towards you until the take up lever is at the highest point. Fig. 1A.
2. Place a spool of thread on the spool pin. Pass the thread through the upper thread guide (1) and down between the upper thread tension discs (2) from the right hand side. See Fig. 10.

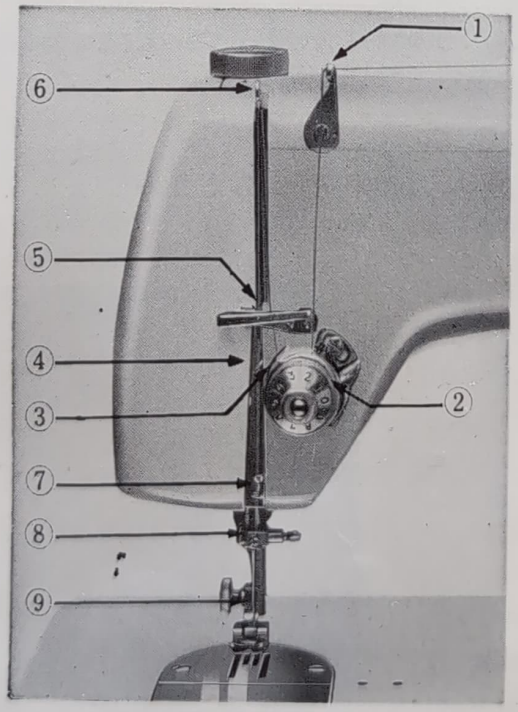


Fig. 10

3. Now bring the thread up and under the thread check spring (3) raising the check spring so that the thread will fall into the hook-shaped guide (4).
4. Carry the thread under the thread guard bar (5) from right to left and then up to and into the eye of the thread take up lever (6) from right to left and down through the thread guard bar (5) and the thread guide (7), (8).
5. Now thread the needle from the front to back of the needle eye and draw the thread out about 6 inches.

to regulate the needle tension

When the needle thread tension is too tight, or the tension on the bobbin thread too loose, the tighter thread will pull the looser thread to make a stitch which is not centered. The needle thread will lie straight on the upper surface of the fabric, as shown in Fig. 11 B.

If the tension of the bobbin thread is too tight, or the needle thread tension too loose, the bobbin thread will lie straight on the under side of the fabric, as shown in Fig. 11 C, instead of being centered as shown in Fig. 11 A.

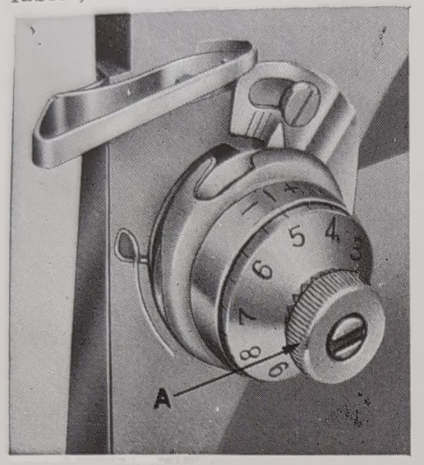


Fig. 11

To regulate tension, merely turn the dial (A), as shown in Fig. 11. If it is turned to the right, the tension will tighten. The higher the number, the tighter the tension. Tension will be loosened by turning the dial to the left. Usually, a quarter of a turn to left or right is all that is needed to adjust the tension. To regulate the bobbin tension spring, follow the instruction on Page 8.

A B C

to regulate the stitch length and the direction of feed

The stitch length is regulated by turning the stitch regulating dial A. On the numbered dial in the window are numerals 0, FINE, 1, 2, 3, 4. When the stitch regulator is set to "O" (neutral), no feeding takes place. But when set at the numbers, feeding takes place. The larger the number, the longer the stitch length. By setting Dial A to the number you desire, the machine will sew forward and at the corresponding stitch length.

To sew reverse, push the button in firmly as far as it will go and keep it in this position until you desire to sew forward.

Note By setting dial A to "FINE", machine will sew a fine stitch which in zigzag sewing produces the satin stitch.

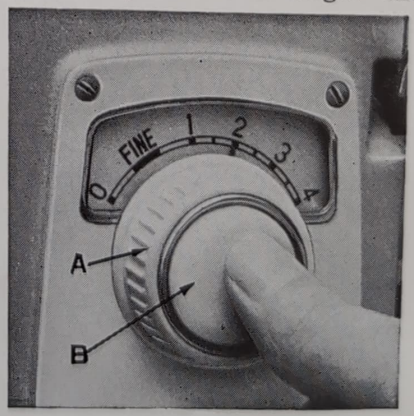


Fig. 12

SEE PAGE 3 FOR NAMES AND LOCATION OF MACHINE PARTS

to prepare for sewing

Raise the presser foot by lifting the presser foot lifter.

Place the bobbin case, which you have already threaded according to instructions on Page 8, into the machine.

1. Follow instructions on Page 9 Figure 9 titled : "To thread the upper thread and the needle".
2. With your left hand, hold the end of the needle thread, and with your right hand, turn the balance wheel towards you until the needle moves down and up again to its highest point, thus catching the bobbin or lower thread.
3. Pull the needle thread you are holding gently and it will bring up the bobbin thread, as shown in Fig. 13.
4. Pull the ends of both threads back under the presser foot.

to start sewing

Raise the needle to its highest point by turning the balance wheel slowly towards you.

Place the material under the presser foot. Lower the presser foot lifter and commence to sew by slowly turning the balance wheel towards you and gently engage the electric motor.

The material will feed by itself, so do not try to help it along. By pulling, you may bend the needle.

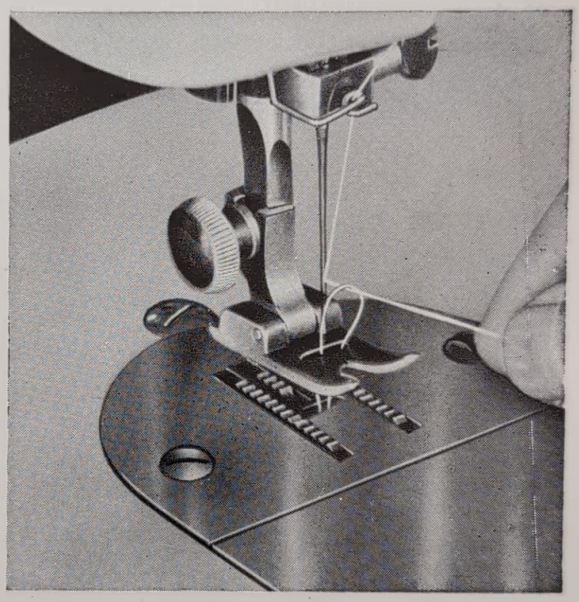


Fig. 13

to remove the work

1. Stop the machine.
2. Raise needle to its highest point by slowly turning the balance wheel towards you.
3. Lift the presser foot by lifting the presser bar lifter.
4. Slide the material you have just sewn out from under the presser foot by pulling it away from you. Cut the threads on the thread cutter.
5. Place the ends of the loose threads to the back under the presser foot. Now you are ready to begin again.

to turn a corner

The machine should be stopped while the needle is in the material you are sewing.

Lift the presser foot and turn the material in the direction you wish. The needle acts as the axis.

Lower the presser foot and start to sew.

how to baste

1. Set knob C to (⋮) straight stitch mark (three red dots)
2. Set lever D to 0.
3. Set the stitch regulating dial A to 4.
4. Loosen the upper thread tension slightly. See Page 10.
5. Since the machine when set as above will produce a loose stitch, you will be able to remove the stitch without difficulty.

how to back tack

Back tacking is used to lock a seam. To do this start about one half inch from the edge of the fabric and sew in reverse by pushing in the reverse button B. When you reach the edge of the fabric release the button B and the machine will sew forward over the stitches thus reinforcing the seam.

the calibrated fabric indicator

Different fabrics need different pressures to be sewn correctly.

To obtain the proper pressure simply turn the calibrated fabric indicator to the type of fabric you are sewing.

For darning, embroidering or monogramming : Set the indicator to DARN See "The Drop Feed", Page 22.

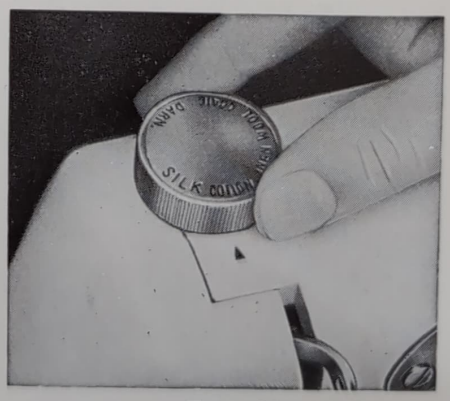


Fig. 14

SEE PAGE 3 FOR NAMES AND LOCATION OF MACHINE PARTS

to change the needle

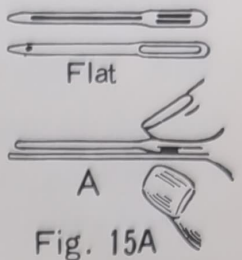


Fig. 15A

1. Raise the needle bar by turning the balance wheel toward you.
2. Loosen the needle clamp screw and remove the old needle, as shown in Fig. 15B.
3. Insert the new needle into the needle clamp hole and push it up as far as it will go.
4. Make sure that the flat side of the needle faces to the back of the machine.
5. Tighten the needle clamp screw securely.

Note : To make sure the needle is straight, check it by placing the flat side on a straight, flat surface, as shown in Fig. 15A.

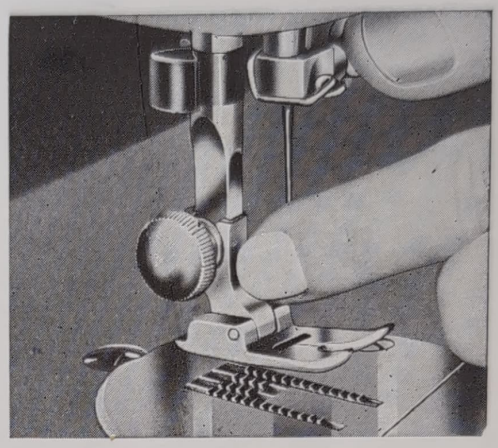


Fig. 15B

to change the needle plate

1. Raise the needle to its highest position by turning the balance wheel towards you.
2. Raise the presser foot by lifting the presser foot lifter.
3. Slide plate out towards you.
4. Using thumb and forefinger, lift out the needle plate as shown in Fig. 16.
5. Place the new needle plate so that the holes fit over the guide screws and press it down.
6. Move the slide plate towards the back until it is closed.

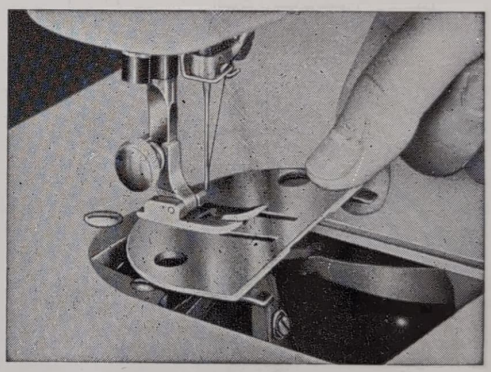


Fig. 16

to change the presser foot

1. Raise the needle to its highest position by turning the balance wheel towards you.
2. Raise the presser foot by lifting the presser foot lifter (31)
3. Loosen the presser foot thumb screw and remove the foot.
4. Place the grooved side of the new presser foot against the flat of the presser bar. Press the foot upward and tighten the thumb screw.

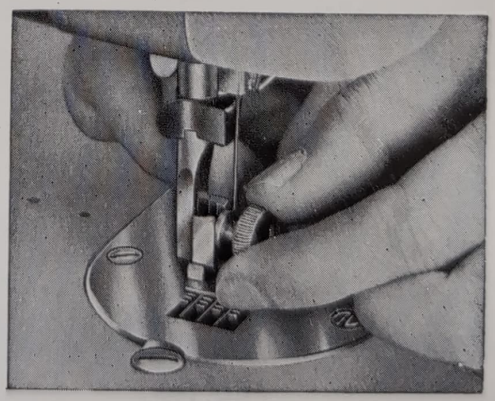


Fig. 17

to remove accumulated lint or thread from the "snap-out" race hook

1. Turn the balance wheel by hand until the needle is at its highest point.
2. Remove the bobbin case and bobbin (see Fig. 6. Page 8).
3. Unscrew knob A, as shown in Fig. 18A.
4. Open the retaining ring B and remove hook C by grasping the center pin of hook C.
5. Remove the accumulated lint and thread from the retaining ring, hook and race body.

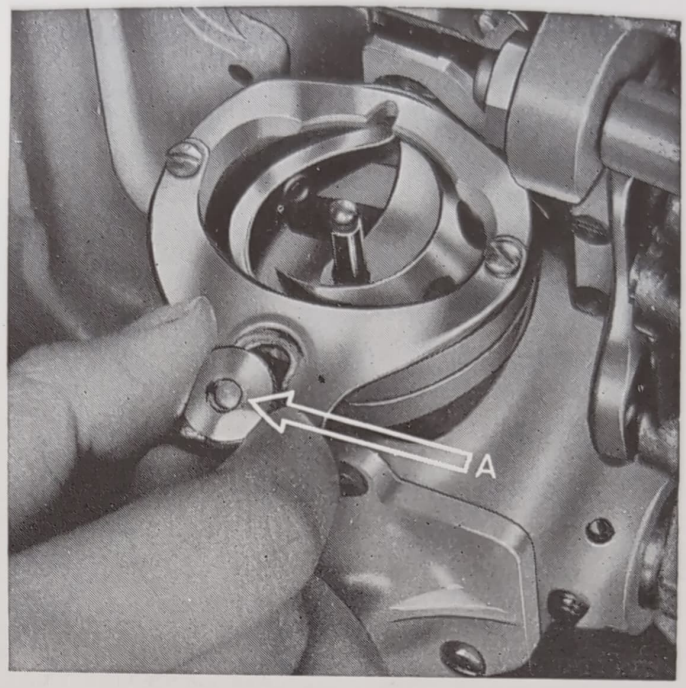


Fig. 18A

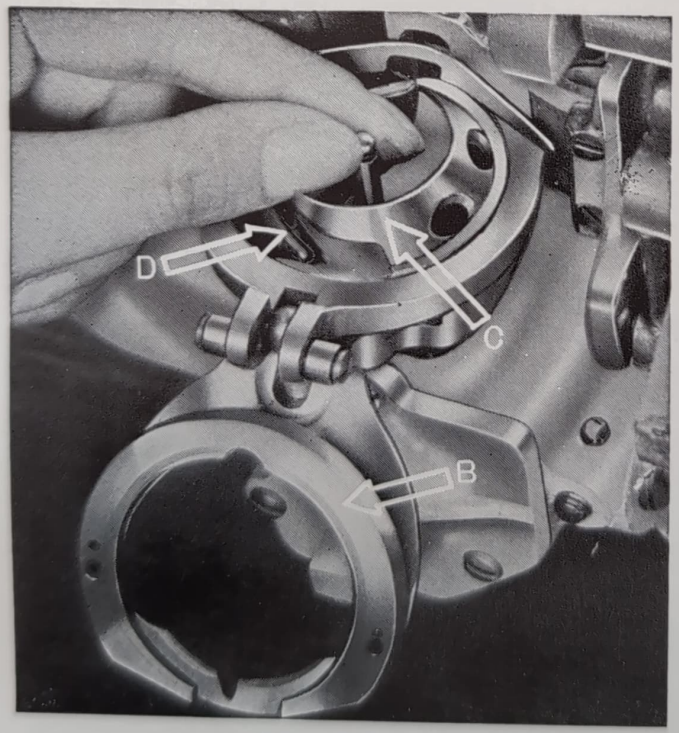


Fig. 18B

6. Replace hook C into the race body with the center pin facing outward, thus forming a perfect circle with the driver D.
7. Close the retaining ring B.
8. Lock the retaining ring by turning knob A in clockwise.
9. Replace the bobbin case and bobbin and commence to sew.

SEE PAGE 3 FOR NAMES AND LOCATION OF MACHINE PARTS

to replace the bulb

By turning towards you the switch on the upper part of the face plate (See Fig. 1A), you can turn the light on and off as you wish. To change the bulb open the face plate, lift up the reflector and screw out the bulb as you do a conventional light bulb. Replace the bulb, push down the reflector and close the face plate. It is advisable to keep a spare bulb on hand.

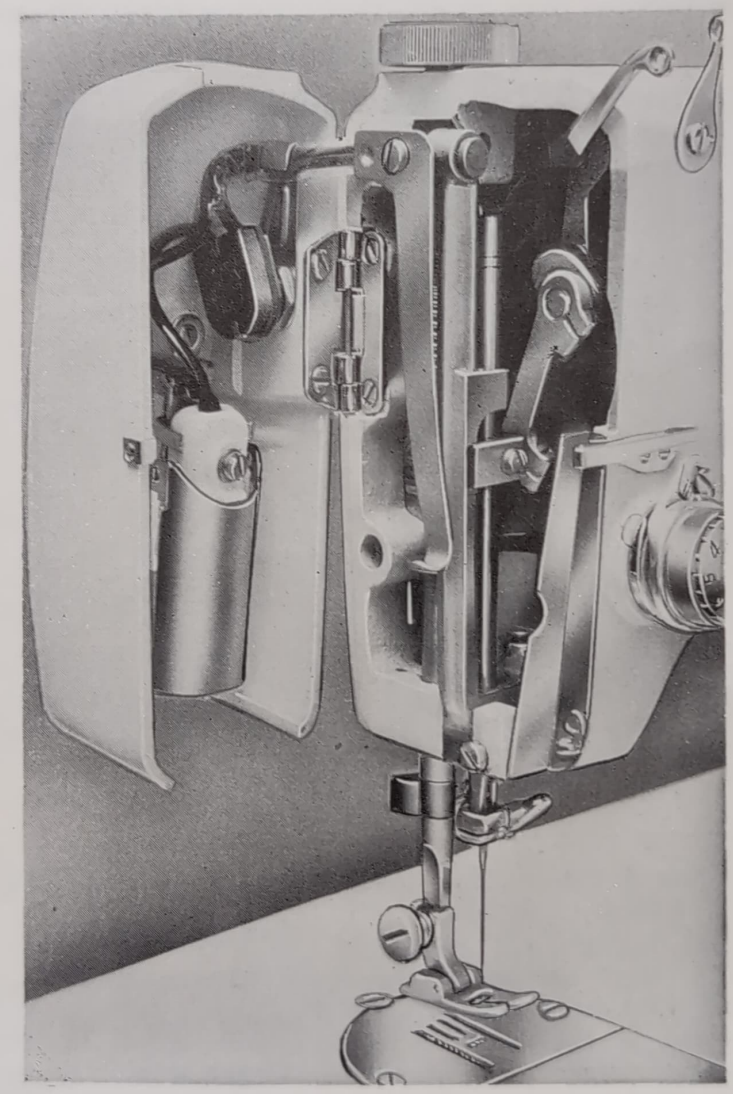


Fig. 19

hints for better sewing

• *Needle Breaks*:

It may be wrongly inserted or bent ; change it. The presser foot may be loose ; tighten it. The thread is not proper for the needle ; see the table below.

• *Upper Thread Breaks*:

The machine may be improperly threaded ; check and rethread. Tension too tight ; loosen accordingly. Needle bent, blunt or incorrectly inserted ; change it. Starting the machine too fast and stopping suddenly ; start and stop gently.

• *Lower Thread Breaks*:

The bobbin case may be improperly threaded ; rethread it. The lower tension may be too tight ; loosen it. See page 8.

• *Stitch Skipping and Uneven Sewing*:

Needle may be bent, blunt or incorrectly inserted ; change it. Lint accumulated under the needle plate ; remove the lint. Stitch too short ; lengthen it. Pulling the material ; don't pull, let it feed itself.

• *Needle and Thread Sizes*:

Needle	Thread	Cloth	Remarks
9	Silk & 100 Cotton	Thin Linen Silk	Thread should always be thinner than the needle eye. When you must use heavier thread than those shown here, select a thicker needle.
11	80, 100 Cotton	Calico Shirting	
14	50, 60 Cotton	Cotton Poplin	
16	30, 40 Cotton	Wool Suiting	

SEE PAGE 3 FOR NAMES AND LOCATION OF MACHINE PARTS

zigzag sewing

This sewing machine enables you to sew ordinary straight stitches, numerous attractive embroidery patterns, buttonholes, blind stitch and many other useful stitches and sew on buttons. The controls for zigzag sewing are concentrated on a single plate for easy operation, as seen in the picture below.

Knob C regulates the width of the zigzag stitch.

On the knob are the numerals : , 0, 1, 2, 3, 4, and 5. For ordinary straight stitch sewing knob C is set to the straight stitch mark, and lever D is set to O. By shifting this knob C slowly towards 5, the width of the zigzag will increase accordingly. Normally lever D rests at O when zigzag stitch.

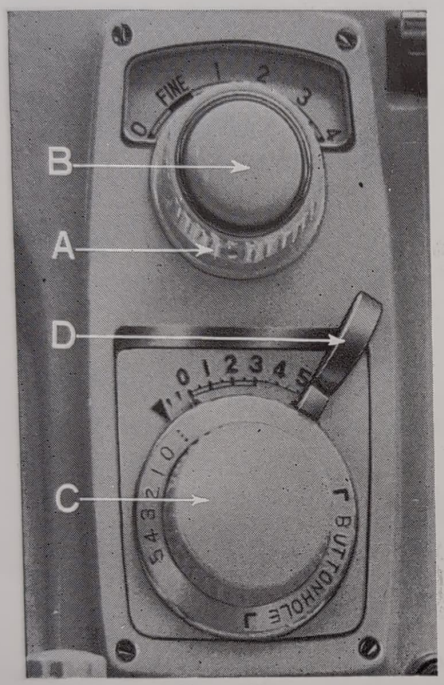


Fig. 20

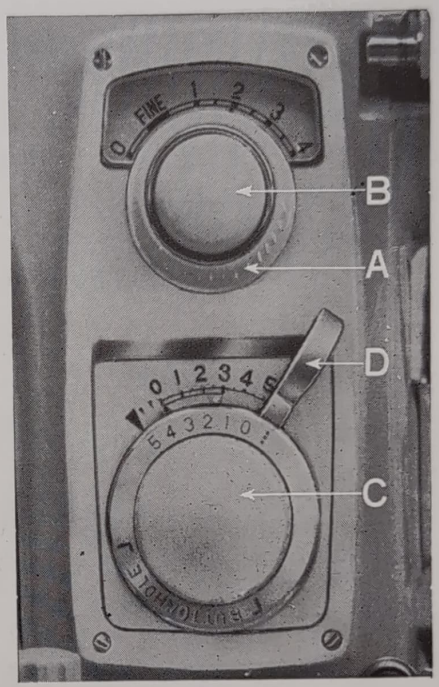


Fig. 21

stitch length

On page 10 you have learned how to regulate the length of the stitch for straight stitch sewing. In the same manner you can regulate the length of the stitch for zigzag sewing to produce many stitch length variations.

To produce the satin stitch, which is the closest zigzag stitch, set the stitch length regulating dial to the right of "FINE" and slowly turn the dial in a counter-clockwise direction to decrease the stitch length until you get the closest satin stitch. Make sure that the stitch length is just close enough because if it is too close the cloth will not feed. To obtain a fine satin stitch the drop feed should be adjusted to suit for the material you are using See page 22.

Note : It is advisable to first make a sample of the satin stitch on a piece of the material you are going to sew.

basic settings for the various stitches

A large variety of zigzag designs can be made on this machine by the simple manipulation of the knobs. It depends entirely on the creative ability of the operator and the skill acquired in timing the movement of the knob "C". Below are the basic stitches and instructions on how to sew them.

A. *To Straight Stitch.*

1. Use the universal sewing foot.
2. Set knob C to (⋮) stragiht stitch mark. See Fig. 21.
3. Set lever D to 0.
4. Commence to sew.

B. *To Make the Satin Stitch.*

1. Set knob C to 5. See Fig. 21.
2. Set the stitch length to "FINE' (closest stitch)
3. Set lever D to 0.
4. Commence to sew.
   It is advisable to set the drop feed to "NORM" for every kind of material.

C. *To Zigzag Stitch.*

1. Set knob C to 5. See Fig. 21.
2. Set lever D to 0.
3. Set stitch length to desired length.
4. Commence to sew.

Note ;

The closeness or coarseness of the satin stitch in this pattern is determined by the position at which you set the pattern on the dial to the arrow. See drawing.

▼ →COARSE SATIN STITCH

CLOSE SATIN STITCH ←

SEE PAGE 3 FOR NAMES AND LOCATION OF MACHINE PARTS

D. *Stitch Width controlled Satin Stitches*:

1. Set stitch length to "FINE" (closest stitch).
2. Move knob C as indicated in chart 1.

Patterns to be sewn	How to move Knob C. See Fig. 21.
	At even speed from 0 to 5 and from 5 to 0. Repeat this.
	Control the speed in moving from 0 to 5 and from 5 to 0. This will produce uniform curves. Repeat this.
	Repeat from 2 to 5 and from 5 to 2.
	Slowly from 5 to 0 and quickly back to 5. Repeat the movement.
	Set lever C at zigzag width desired between 2~5. Sew the material guiding from left to right, right to left w/hand and repeat.

Chart 1

E. *Using the Twin Needle.*

1. To insert the twin needle follow the same rules as for single needle insertion. See Page 13.
2. To thread the upper thread, follow the same rules as for a single thread, (See Page 9.) and thread each needle separately.
3. You can sew any stitch variety or pattern with the twin needle, but remember that too large a width will break the needles. Therefore, you must set lever D to 3 or less so that the twin needle will not strike the edge of the needle plate slot. Before starting to sew, turn the balance wheel slowly towards you to see that the twin needle enters the needle plate slot without hitting any part of the needle plate.

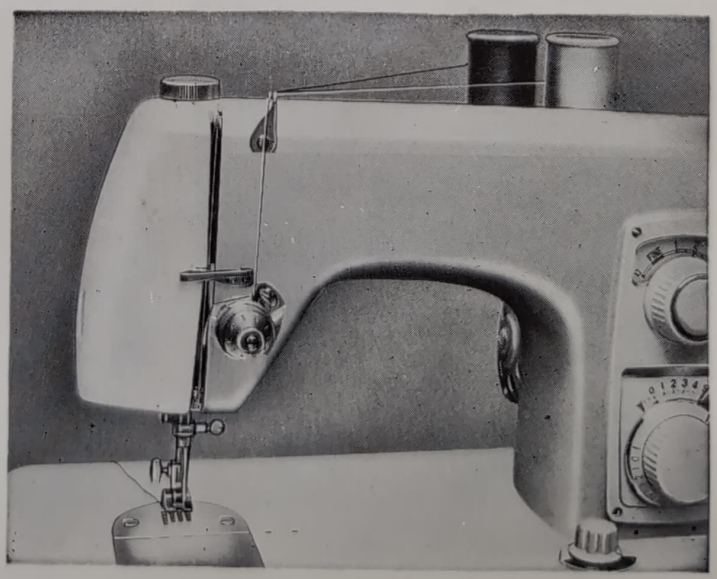


Fig. 22

how to make buttonholes

1. Set drop feed knob to "NORM".
2. Set fabric calibrator dial to buttonhole mark.
3. Set stitch length dial to midway of the index "FINE".
4. Have ready a sample cut of material to be used.
5. On sample material, test sew row of zigzag stitching until satin stitch is obtained.

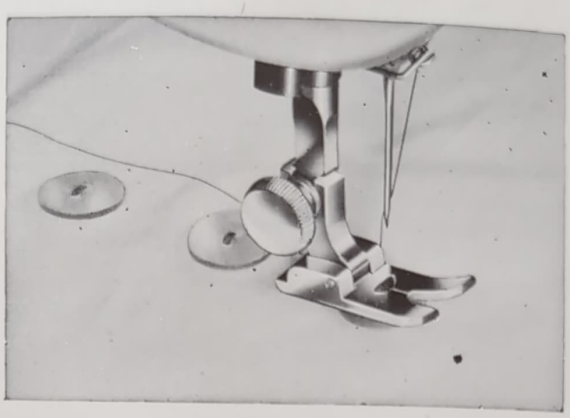


Fig. 23

6. Set lever D to O and turn buttonhole knob clockwise until mark ⌟ on knob is in line with triangular red mark on panel.
7. Sew on sample material. The machine will automatically bar tack front of buttonhole and thence sew in reverse as illustrated. See Fig. 1.
8. Sew right side of buttonhole to length desired. Then turn buttonhole knob clockwise until mark ⌜ on knob is in line with triangular red mark on panel.
9. The machine will automatically bar tack rear of buttonhole and forward stitch the left side of buttonhole. Sew up to front bar tack to complete buttonhole as illustrated. See Fig. 24.
10. If the ripping space in center of buttonhole is too wide after test sewing on sample material, set lever D to range between 2 and 3 and test sew again on sample material.
11. After you get the desired buttonhole and size, mark position of buttonhole on material to be use before actually sewing.

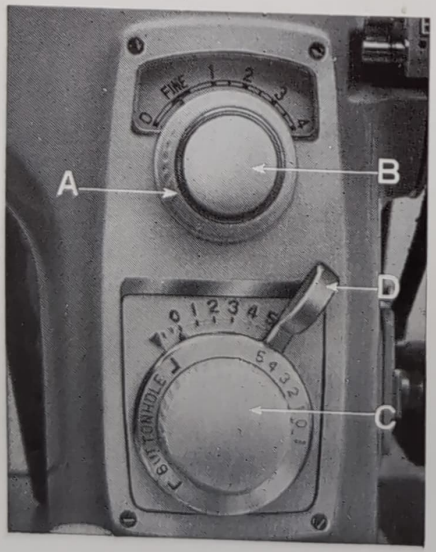


Fig. 24A

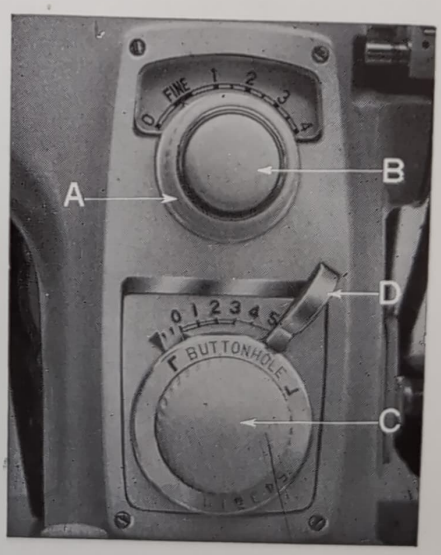


Fig. 24B

SEE PAGE 3 FOR NAMES AND LOCATION OF MACHINE PARTS

how to sew on buttons

1. Use the universal sewing foot.
2. Drop the feed. See Fig. 27.
3. Set knob C to 4 (Fig. 21) or less, according to the distance between the holes of the button.
4. Set lever D to 0.
5. Place fabric under presser foot.

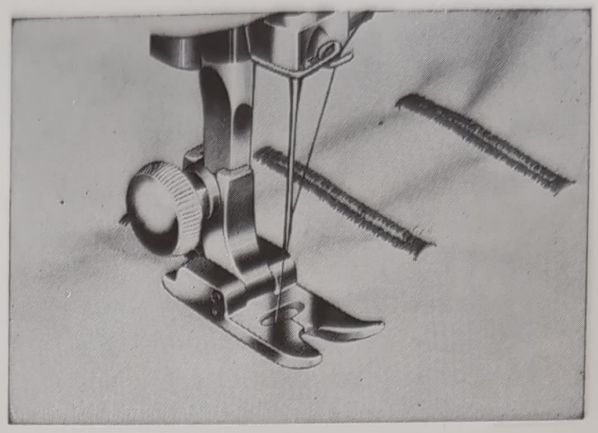


Fig. 25

6. Place the button between the presser foot and the fabric with the holes in a horizontal line (the direction in which the needle zigzags) and lower the presser foot.
7. Rotate the balance wheel slowly towards you, making sure the needle enters the holes in the button. Slowly start the machine, and sew at least, 8-12 stitches. Finish with the needle in one hole of the button.
8. Raise the presser foot. Set the zigzag lever back to 0.
9. Lower the presser foot and sew 5 or 6 stitches to seal lock stitch.

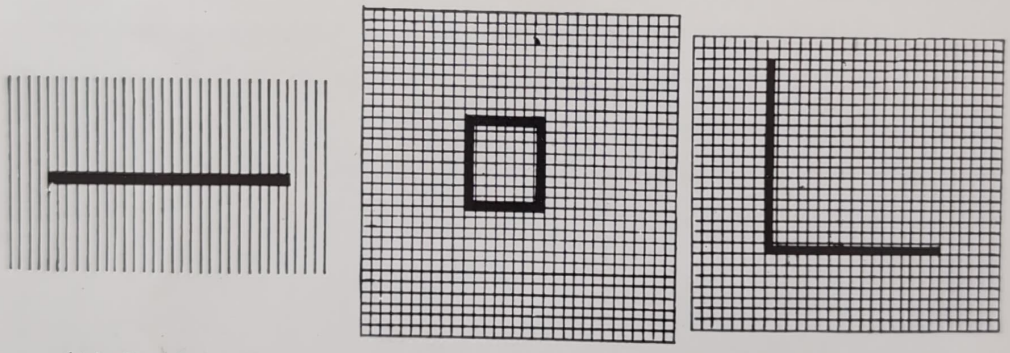
the drop feed

When sewing different materials, it is best to have the proper feed. Adjust the feed according to the material you are sewing. To sew silk, or the like, set the drop feed to "SILK". To sew heavier materials set it to "NORM". "DARN" indicates the complete dropping of the feed which is necessary for darning, embroidering, mending, etc.

Fig. 26

mending

1. Remove the sewing foot.
2. Lower the drop feed to position "DARN".
3. Set zigzag knob C to (⋮) straight stitch mark.
4. Set the stitch length regulator A to O. See Fig. 21.
5. Set lever D to O.
6. Place work on an embroidery hoop or frame. Stretch the material as firmly as possible. Trim with scissors all loose ends of the material.
7. Place the frame under the needle and lower the presser bar.
8. Turn the balance wheel by hand and do one stitch. Bring the bobbin thread to the top of the material. Hold this thread with your left hand and turn the balance wheel. Make 2 more stitches.
9. Hold the frame lightly between the fingertips with the machine running at a medium to fast speed and move the frame away from and toward you over the tear. The stitch lines should be as close together as possible and extending approximately ½" on either side of the tear. Proceed in the same for different shapes of tears as illustrated in Fig. 27 A, B, and C.



(A) Straight Tear (B) Hole (C) L-Shaped Tear

Fig. 27

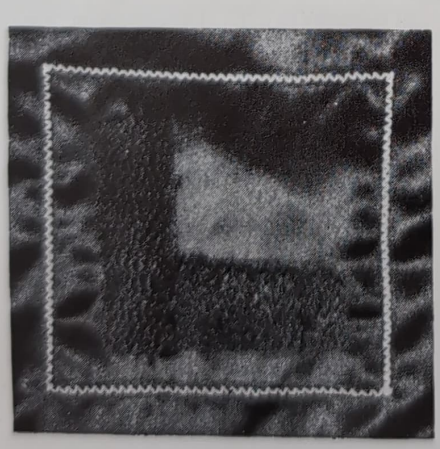


Fig. 28

Fig. 29

SEE PAGE 3 FOR NAMES AND LOCATION OF MACHINE PARTS

how to sew on hooks, eyes and spress-tuds

1. Set your machine as for sewing on buttons. (Page 21)
2. Oversew the stem of the hook very near to the holes (See Fig. 30 A), then slide the hook along into the position as in Fig. 30 B.
3. Move the holes of the hook under the needle and sew approximately 10 stitches as in Fig. 30 C.
4. Place the holes of the eye underneath the needle and sew approximately 10 stitches as in Fig. 30 D.
5. To firmly secure the eye, make a few small zigzag stitches on either side of the curve at the top of the eye by moving the zigzag lever onto a smaller stitch (See Fig. 30 E).
6. For sewing on press-studs—please see Fig. 30 F & G. Either way can be used.

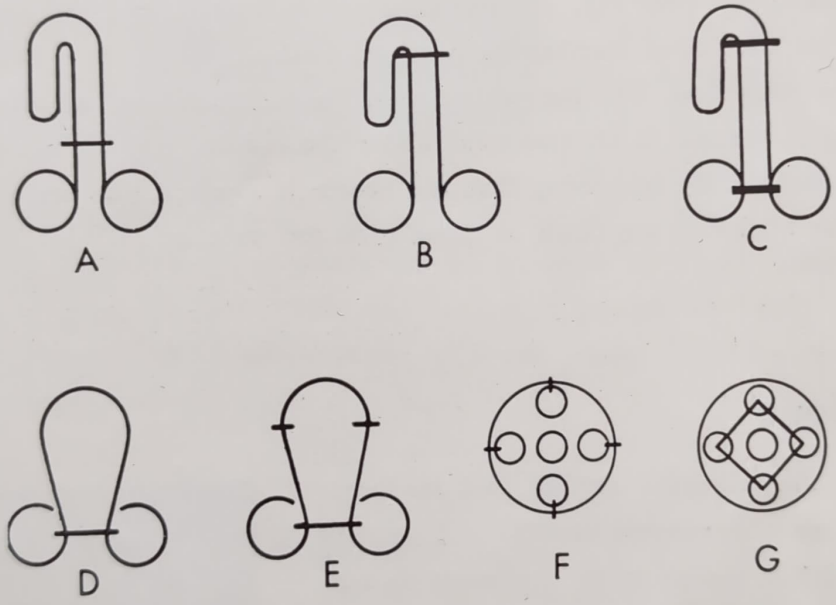


Fig. 30

Fig. 31

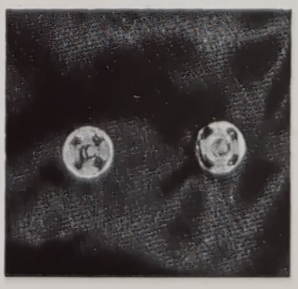


Fig. 32

embroidering and monogramming

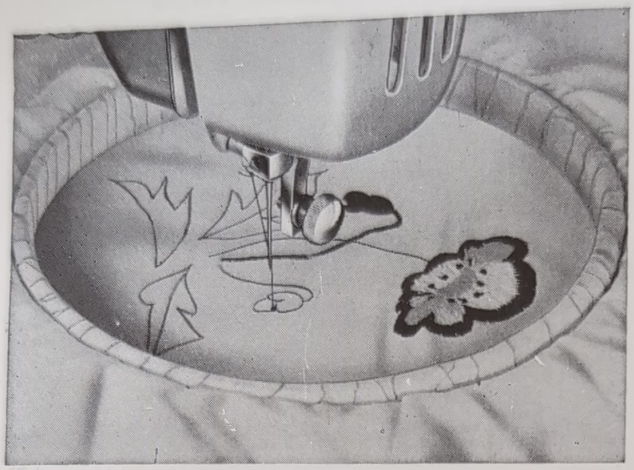


Fig. 33

Proceed exactly in the same way as for mending and darning, by placing the material in the frame and sewing the first few stitches.

Before attempting to embroider initials, it is essential to practise making a perfect satin stitch, in straight lines or curves.

Set knob "C" (See Fig. 21) width of stitch desired, and set lever D to O, or to the same number as you set knob C.

When practising, use the widest possible stitch to get accustomed to moving the frame in all directions under the needle, making curved satin stitch designs. By imagining that the needle is a pencil, you can sew your name or initial on any cloth as though you are writing.

applique

1. Use the universal sewing foot for lace, felt or embroidered motifs.
2. Place the design to be appliqued on top of the foundation material and baste it.
3. Now proceed to oversew the edges with zigzag stitching.

Fig. 34

SEE PAGE 3 FOR NAMES AND LOCATION OF MACHINE PARTS

how to do cording

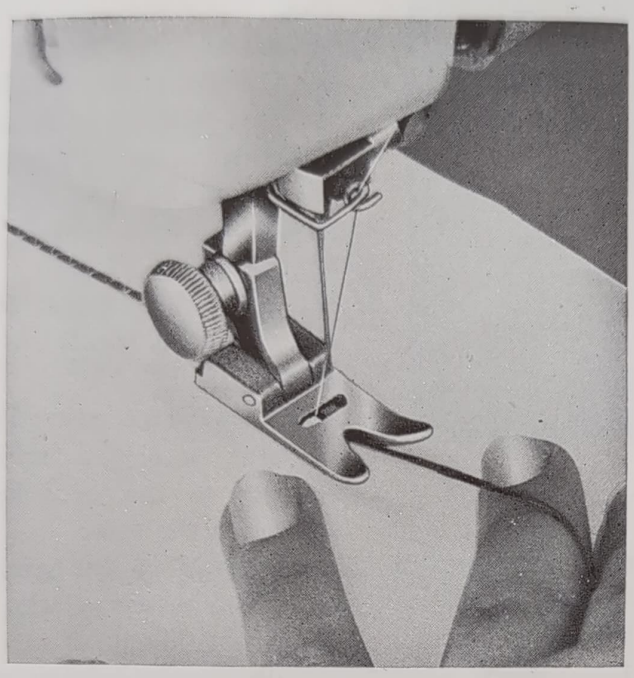


Fig. 35

1. Use the universal sewing foot.
2. Set zigzag knob "C" (See Fig. 21) to the width of the zigzag matching the thickness of the cord be ingused.
3. Set lever D to O. (or to the same number you set knob D)

Note:

If a thin cord is used beneath a satin stitch, this will have the effect of raising the satin stitch, giving an embossed effect and the cord will not be visible.

Very attractive decorative effect can be achieved by using cottons contrasting in color to that of the cord and sewing over the cord with a stitch length of approximately 2 and with the zigzag width set according to the thickness of the cord.

shirring with elastic thread

1. Commence by winding the elastic thread onto the bobbin by hand, making certain that the thread is not stretched while winding.
2. Loosen the bobbin tension completely as much as possible.
3. Place the bobbin into the bobbin case, threading it the usual way.
4. The top thread should be sufficiently strong, of approximately No. 30 in thickness. Tighten the top tension until it is very firm.
5. Proceed with straight sewing. The longer the stitch length, the fuller the shirring effect will be, and, the smaller the stitch length, the finer.

how to make a hem

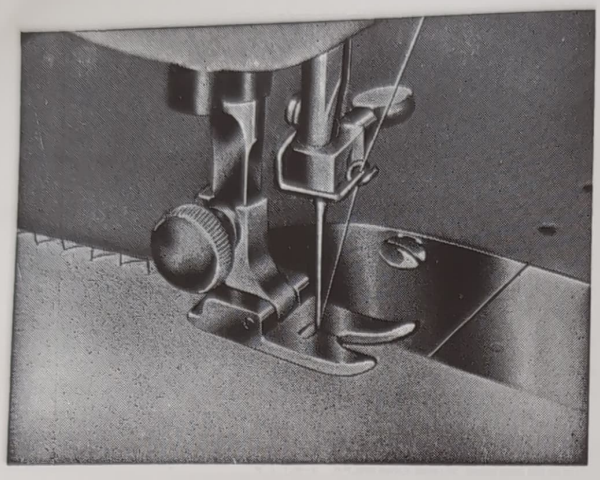


Fig. 36

1. Use the universal sewing foot.
2. Set knob C to "straight stitch" mark, (See Fig. 21) if you wish a straight stitch, or to a zigzag width number if you wish zigzag stitch.
3. Set lever D to O.
4. Set the stitch regulating dial "A" (See Fig. 21) to 2 or 3.
5. Insert the edge you wish to hem into the scroll opening of the hemmer, and lower the foot.
6. Guide the material evenly, making sure that one half of the scroll opening is filled with the edge of the material. Start to sew slowly.

Note: You can use the narrow hemmer or the felling foot depending on the hem you desire.

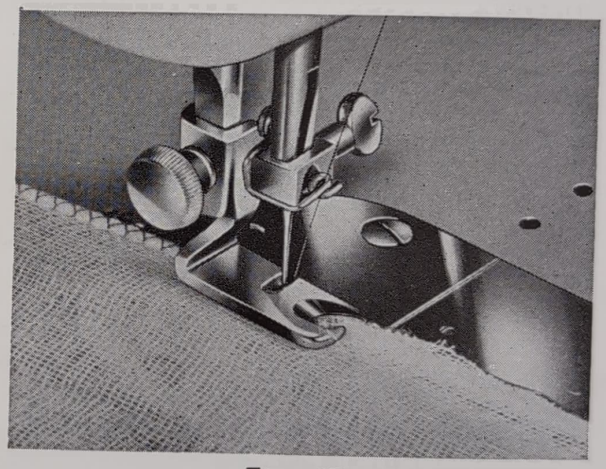


Fig. 37

how to make the shell stitch

This stitch is especially useful for thin materials such as silk, chiffon, and rayon. To make this stitch, proceed as for hemming, (See above: "How to Hem"). It is advisable to use a wide zigzag stitch and long stitch length. Also make sure the upper tension is a little tighter than normal. This will cause the edge to picot and produce the shell stitch.

how to hem lace

Proceed as for hemming. (See above) insert the lace in the hemmer foot and guide the lace evenly.

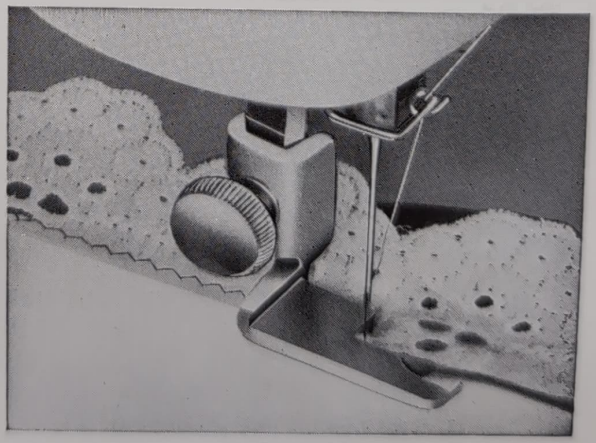


Fig. 38

SEE PAGE 3 FOR NAMES AND LOCATION OF MACHINE PARTS

how to attach lace

1. Use the universal sewing foot.
2. Place the lace on top of the material and let it overlap the edge of the material by 1/4" Hold in this position, and place the lace and the material under the presser foot.
3. The width of the zigzag should be set depending on the width of the lace, and the stitch length should be set depending on the thickness of the lace. **The wider the lace, the wider the zigzag. The thicker the lace, the closer the stitch length.**

how to make a hemstitch

1. Set knob C to 2 or 3. See Fig. 21,
2. Set lever D to O.
3. Set the stitch regulating dial "A" to 3. See Fig. 21.
4. Draw out desired number of threads from the material.
5. Place the material under the presser foot and start to sew slowly.
6. Make sure the stitch is close to the edge of the space from which you have drawn the threads.
7. After stitching the one side, stitch the other side in the same manner.

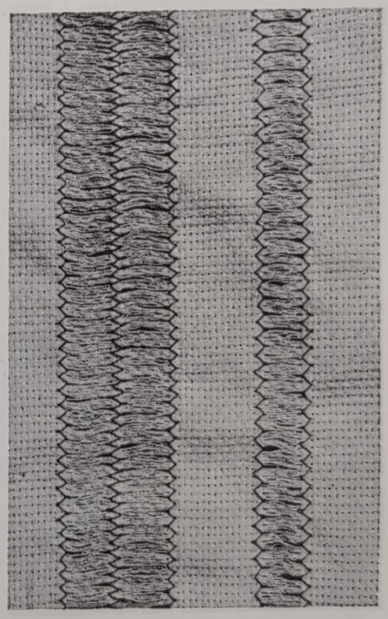


Fig. 39

Note

You can obtain a picot edge by cutting between the parallel lines of the stitching.

how to make flat felled seams

1. Use the felling foot.
2. Set the zigzag knob "C" to O. See Fig. 21.
3. Set lever D to O.
4. Set the stitch regulating dial "A" to 2.
5. Lay the fabric pieces on top of each other so that the front side of each piece is inside and the back side is on the outside. The right edge of the bottom fabric should extend about 1/8 or an inch beyond the edge of the top fabric piece.
6. Place the fabric under the foot using the long toe as a guide and sew the full length of the seam. Fig. 40A.
7. Flattendout fabric, keeping the front side down and you will find that the 1/8" edge stands up as shown in Fig. 40B.
8. Now lift the foot and fold over the edge of the material to the left and insert into the scroll opening of the foot. See Fig. 40B
9. Lower the foot and start to sew slowly (guide the fabric evenly).

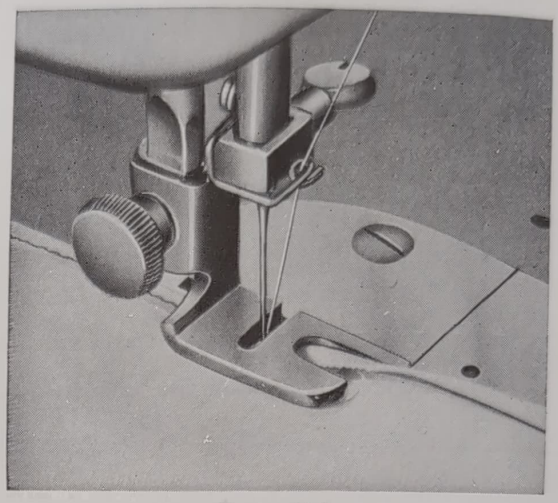


Fig. 40A

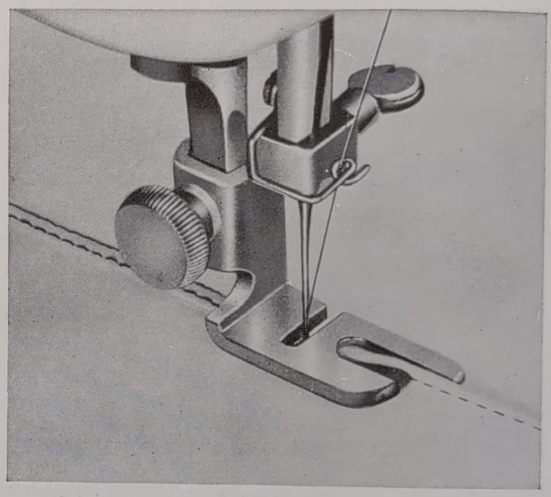


Fig. 40B

to make the overlock stitch

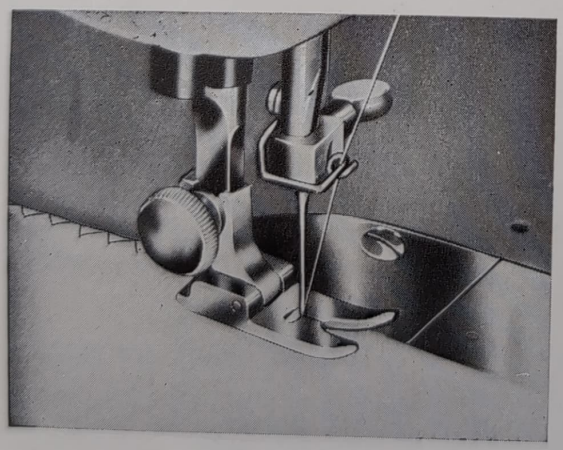


Fig. 41

1. Use the universal sewing foot.
2. Set the stitch regulating dial "A" (Fig. 21) to 2 or to a longer stitch, depending upon the closeness of the overlock you desire.
3. Set lever D to O.
4. Set the zigzag lever "C" (See Fig. 21) to 5 or less, depending upon the width of the overlock you desire.
5. Place the edge of the material under the presser foot and make sure when sewing that the needle sews into the fabric on the one side and just misses the edge of the material on the other side of the zigzag.

SEE PAGE 3 FOR NAMES AND LOCATION OF MACHINE PARTS

how to make a blind stitch hem

1. Use the universal sewing foot.
2. Set knob "C" to "BLIND STITCH MARK".
3. Set lever "D" to O.
4. Set stitch regulating dial to 2 or 3. See Fig. 21.
5. Fold the material into the size of the hem desired and fold back as in Fig. 43A with a ¼" overlap on the bottom fold of the edge.
6. Proceed to sew down the fold as in Fig. 42B.
7. After stitching is finished, unfold the material as shown in Fig. 42C and you will have a blind stitch hem.

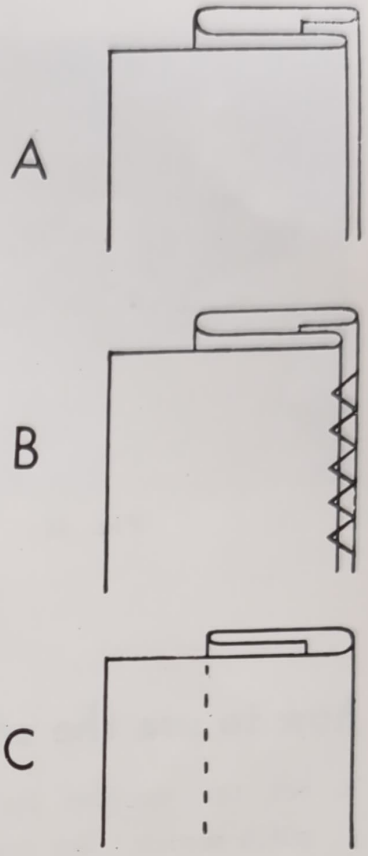


Fig. 42

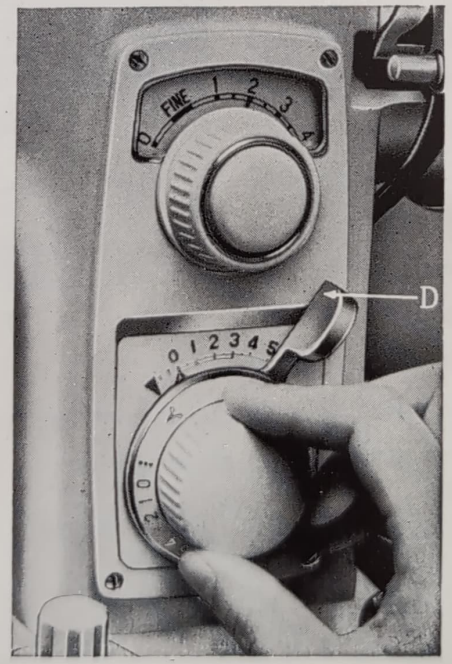


Fig. 43

how to use the cloth guide

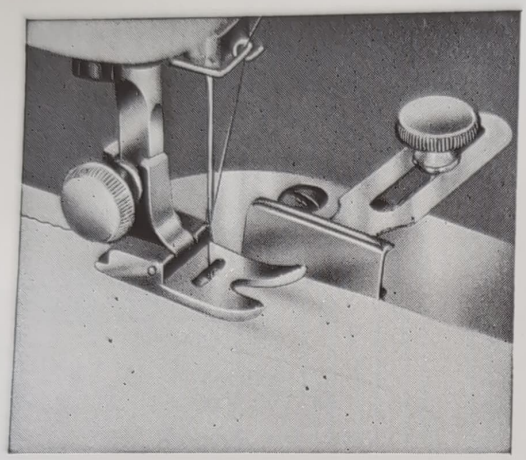


Fig. 44

When you desire to sew close to the edge of a seam or a wide seam up to ¼" in a straight and uniform line, the cloth guide will help you do it.

To attach the cloth guide, place it over the hole located on the bed of the machine to the right of the needle plate.

Place the thumb screw through the guide slot and adjust the guide to the desired distance and secure it firmly.

how to use the adjustable zipper foot

1. Set the machine for straight stitch sewing. See Page 18.
2. Remove the presser foot and attach the adjustable zipper foot. See Page 13.
3. Fig. 44 shows the zipper foot set ot sew on the right of the needle, close to the edge of the material which is turned to form a placket or opening, so as to avoid striking the zipper links.
4. To sew on the opposite side of the zipper fastener, loosen screw and slide the zipper foot over to the left of the needle, and sew close to the edge without striking the zipper links.

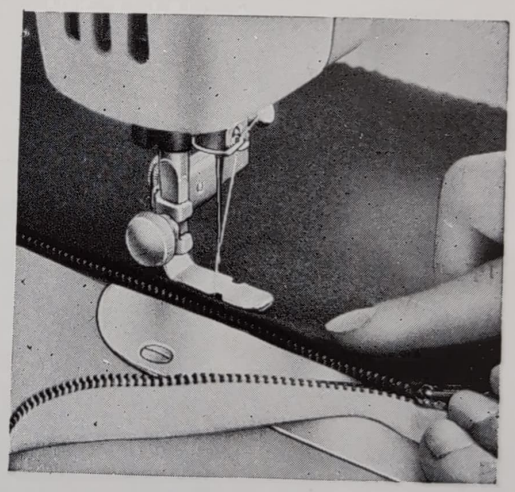


Fig. 45

SEE PAGE 3 FOR NAMES AND LOCATION OF MACHINE PARTS

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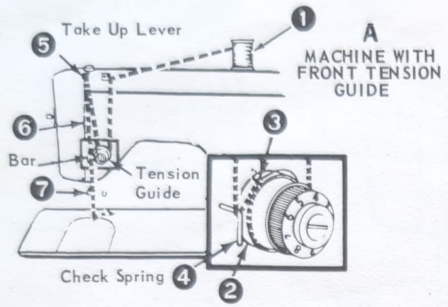
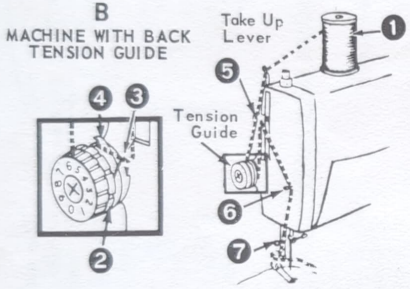
INTERCHANGEABLE PARTS CATALOGUE (MODEL 110, 190, 210, 230, 270, 280, 290, 370, 380, 390)

REF No.	PARTS No.	PARTS NAME
1	B0150	Rubber Ring
2	B0013	Set Screw for Bed Hinge
3	B3741	Hexagonal Screw for Motor Bracket
4	B0197	Washer for Hexagonal Screw
5	B5720	Needle
6	B7850	Needle Clamp Assembly
6-1	B3205	Needle Clamp
6-2	B6136	Needle Clamp Screw
7	B4139	Needle Plate
8	B1671	Flat Head Screw for Needle Plate
9	B2739	Needle Plate Guide Screw
10	B4140	Slide Plate
11	B6086	Slide Plate Spring
12	B0035	Fastening Screw for Slide Plate Spring
13	B0041	Washer for Stop Motor Screw
14-1	B0042	Stop Motion Knurled Hand Screw
14-2	B2035	Stop Motion Knurled Hand Screw (for Model 360, 370, 380, 390)
15-1	B0043	Set Screw for Stop Motion
15-2	B2036	Set Screw for Stop Motion (for Model 360, 370, 380, 390)
16	B5679	Presser Foot (Universal Foot)
17	B6120	Fastening Screw for Presser Foot
18-1	B4159	Feed Dog (for Model 110, 190, 370)
18-2	B6346	Feed Dog (for Model 270, 230, 290, 380)
19	B0080	Fastening Screwfor Feed Dog
20	B4753	Shuttle Driver Assembly
20-1	B2458	Shuttle Driver
20-2	B0190	Shuttle Driver Spring
20-3	B0191	Flat Head Screw for Driver Spring
21	B2456	Taper Pin for Shuttle Driver
22	B4188	Shuttle Race Assembly
22-1	B4190	Race Top Srping
22-2	B0105	Fastening Screw for Top Spring
23	B4354	Shuttle
24	B0108	Bobbin Case Assembly
25	B0117	Bobbin
26-1	B4269	Double Spool Pin
26-2	B8696	Double Spool Pin (for Model 270, 280)
26-3	B0118	Spool Pin on Bed
27	B0119	Spool Pin Felt
※	B0853	Upper Tension Assembly
28	B2351	Tension Stud Bushing
29	B4649	B4649 Set Screw
30	B2352	Tension Stud
31	B0242	B0402 Fastening Screw
32	B2353	Thread Take-up Tension Dial
33	B0242	B0402 Fastening Screw
34	B2354	Thread Take-up Spring
35	B2355	Thread Take-up Tension Indication
36	B0360	B0360 Flat Head Screw
37	B2830	Cup Washer for Tension Dial
38	B8721	Tension Disc
39	B2828	Tension Release Pin
40	B2358	Tension Disc Washer
41	B3395	Upper Thread Tension Spring
42	B0821	Tension Disc
43	B0822	Upper Thread Tension Knob
44	B3393	Needle Bar Thread Guide
45	B0139	Fastening Screw for Needle Bar Thread Guide
46	B1500	Thread Cutter
47	B4137	Needle Bar
48	B4237	Presser Bar (110, 190, 270, 280, 290, 370)
49-1	B4144	Forked Connecting Rod (110, 190, 270, 280, 290, 370)
49-2	B6955	Forked Connecting Rod (for Model 230 380)
49-3	B9008	Forked Connecting Rod (for Model 210, 390)
50	B0066	Slide Block
51	B0067	Slide Block Stud
52	B0089	Stud Screw
53	B0090	Nut for Stud Screw
54	B4174	Crank Rod Assembly
55	B4916	Stud Screw for Crank Rod Assembly
56	B0090	Nut for Stud Screw
57	B6137	Face Plate Hinge
58	B0242	Fastening Screw for Face Plate Hinge
59	B2843	Flat Head Screw for Face Plate Hinge

BASIC STEPS FOR EASY SEWING

HOW TO THREAD



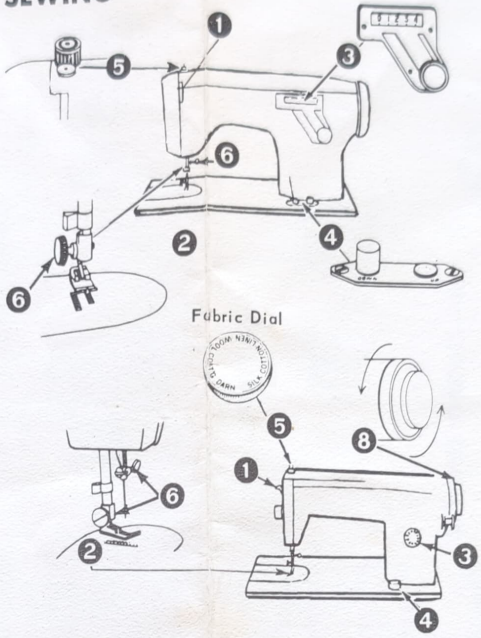


THREADING STEP BY STEP:

Place spool of thread on spool pin and progress the thread as follows:

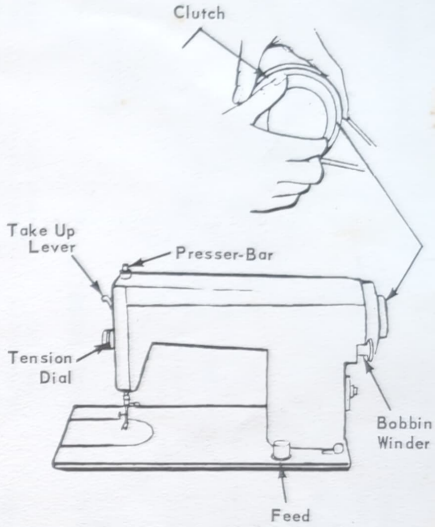
1. From the spool pin to guide on top of the machine.
2. Down between the tension discs (from right to left) illustration A. If your machine has front tension guide, or back to front, illustration B for machines with back tension guides.
3. Go into check spring.
4. Through the thread bar or hook.
5. Into the take up lever going from right to left. Illustration A, or back to front, illustration B.
6. Down into lower guides.
7. Through the needle bar guide.
8. Into the needle from left to right (or from front to back on zigzag models with front loading bobbin).

SEWING



1. Place take up arm to its highest position.
2. Make sure the bobbin thread is pulled up and both threads are under and back of the presser foot.
3. Set stitch length regulator for about half way between 0 and highest number for normal stitch, or smaller number for smaller stich and higher number for longest stitch.
4. Set feed to its highest position. It is regulated either by a knob or two buttons located on the right lower front of machine.
5. Set fabric dial to material you are using, or push presser bar cap down.
6. Tighten the presser foot and needle clamp securely with screw driver.
7. Place fabric into sewing postion and lower the presser foot.
8. Start to sew by slowly turning balance wheel towards you and gently pressing the foot control.
9. Practice sewing forward and backward on scrap material to clear any dust or lint that might affect thread tension.

AVOID THESE MISTAKES



1. Never use a bent or dull needle.
2. Never sew without fabric under the foot.
3. Don't start to sew unless the take up lever is in its highest position.
4. Never try to sew with fabric dial set to Darn, or stitch tension set to 0, the feed at its lowest postion, or the presser bar up instead of depressed.
5. Don't sew with the bobbin winder engaged. Also, don't forget to tighten the clitch after winding the bobbin.
6. Avoid pulling or pushing the fabric, always guide it lightly.
7. Never remove the fabric without turning the hand wheel to raise the take up lever to its highest position.

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